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## THE PALACE OF THE KINGS OF TIRYNS.

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THE traveler that goes from Nauplia to Argos, passes, on his right, several rocky heights that lie in close proximity to one another and stand forth like islands from the marshy ground. On the lowest and flattest of them, at a distance of hardly a mile from the gulf, is the most ancient citadel of Tiryns, now called Palæocastro, the mythic birthplace of Hercules, and the residence of many mighty legendary kings. The origin of Tiryns belongs to a remote prehistoric period. In the time of Homer, the city was very old, deprived of its autonomy, and a vassal to Argos. My excavations have proved that the palace of the ancient Tirynthian kings, which occupies the whole upper citadel, had been destroyed in prehistoric times. Its ruins lay buried in the *débris*, its site had remained uninhabited, and the ancient acropolis had stood desolate and deserted in the midst of the small and insignificant lower city that surrounded it. Nevertheless, Homer expresses his admiration of the citadel-walls by the epithet τεχίονεςα ("walled") that he gives to Tiryns. Throughout classical antiquity, these walls were considered a marvel. Pausanias (ix., 36) places them, as a miraculous work, on a level with the Pyramids, for he says: "The Hellenes are bent on admiring foreign things much more than those they have in their own country, and thus it has occurred to ancient authors to describe minutely the Pyramids of Egypt, whilst they have not deigned to write a syllable of the treasury of Minyas (at Orchomenus), or the walls of Tiryns, which deserve the same admiration." Farther on he says (ix., 36), regarding the walls of Tiryns: "The wall, which is the only remainder of Tiryns, was built by the Cyclopes. It consists of rude stones, each of which is so large that a team of two mules cannot move even the smallest of them from the spot. The interstices are filled up with small stones in order to consolidate the large blocks still more in their position."

These stones are, on an average, about six feet six inches long, and three feet broad, and, judging by the remains, the height of the wall seems to have been about forty-eight feet.

According to Apollodorus (ii., 2, 1), Pausanias (ii., 16, 4), and Strabo (viii., 372), Prætus, King of Tiryns, sent for the Cyclopes, seven in number, who came from Lycia to build him the walls of Tiryns. By these or other Cyclopes, according to the legend, many other similar buildings in Argolis must have been erected, and especially the walls of Mycenæ, in consequence of which Euripides ("Orestes," 965) calls the whole of Argolis the Cyclopean land, and designates the houses of Mycenæ ("Iphigenia in Tauris," 845), and Mycenæ itself ("Iphigenia in Aulis," 152, 265, 1500, 1501), as Cyclopean edifices. Tiryns is also called by Pindar (fragmenta, 642, ed. Boeckh) κυκλώπια πρόθυρα ("Cyclopean courtyard"). But it is especially remarkable that we find in Hesychius τῖρύνθειον πλίνθευγα, that is to say, "the Tirynthian brick-building," for, as we shall see, this is in curious accordance with the construction of the grand prehistoric palace that I have brought to light at Tiryns.

Tiryns being near the sea, and in a plain so low that the road on the west side of the citadel is ten feet above sea-level, it makes on all travelers the impression that in classical times it must have been washed by the sea, and that the marshy tract of land that now separates the citadel from the gulf must be alluvial accession of comparatively modern date. But this is a mistake, as is proved by the Cyclopean remains of a prehistoric city and its mole on the sea-shore, about a mile and a quarter from Tiryns. It is true that the ancient port has now grown shallow, being hardly one foot deep; but it seems impossible that the ancient mole could have extended, three thousand years ago, more than three hundred feet farther into the sea than it does now. There can be no doubt that the rock of Tiryns has once been washed by the sea, but at a remote prehistoric time.

The myth of Hercules' birth at Tiryns, and of the twelve labors imposed upon him by Eurystheus, King of Mycenæ, finds its explanation in his double nature as Sun-god and hero. It is but natural that he, the strongest of all heroes, should be fabled to have been born within the most powerful walls, which were considered to be the work of supernatural giants; and as Sun-god he must have had, in the plain of Argos, at least as many sanctuaries as his successor, the prophet Elias, now has, who

ascended to heaven in a chariot of flames, and who, therefore, cannot be anything but a Sun-god, for in antiquity, as now, the marshy lowlands engendered pestilential fevers, and could only be cultivated by incessant human labor and by the beneficial influence of the sun. According to the legend, the first king of Tiryns was Prætus, brother of Acrisius, King of Argos. Having been expelled by Acrisius, Prætus went to Iobates, King of Lycia, whose daughter Antæa he married, and who sent with him an army, to be crowned King of Tiryns. The legend of this mythic king, whose date would be about 1400 B. C., is confirmed by Homer (*Iliad*, VI., 157–170), who informs us that Bellerophon of Corinth came to the court of Prætus at Tiryns. Here he met with an adventure similar to one that befell Joseph in Egypt; for Queen Antæa fell deeply in love with the stranger, whom, as Homer says, the immortals had given beauty and graceful manly strength. Pope translates the passage thus:

“For him Antæa burned with lawless flame,  
 And strove to tempt him from the paths of fame:  
 In vain she tempted the relentless youth,  
 Endued with wisdom, sacred fear, and truth.  
 Fired at his scorn, the queen to Prætus fled,  
 And begged revenge for her insulted bed:  
 Incensed he heard, resolving on his fate;  
 But hospitable laws restrained his hate.  
 To Lycia the devoted youth he sent,  
 With tablets sealed that told his dire intent.  
 Now, blest by ev’ry power who guards the good,  
 The chief arrived at Xanthus’ silver flood:  
 There Lycia’s monarch paid him honors due;  
 Nine days he feasted, and nine bulls he slew.  
 But when the tenth bright morning orient glowed,  
 The faithful youth his monarch’s mandate showed:  
 The fatal tablets, till that instant sealed,  
 The deathful secret to the king revealed.  
 First, dire Chimæra’s conquest was enjoined;  
 A mingled monster, of no mortal kind;  
 Behind, a dragon’s fiery tail was spread;  
 A goat’s rough body bore a lion’s head;  
 Her pitchy nostrils flaky flames expire;  
 Her gaping throat emits infernal fire.  
 This pest he slaughtered (for he read the skies,  
 And trusted Heaven’s informing prodigies).  
 Then met in arms the Solymæan crew  
 (Fiercest of men), and those the warrior slew.  
 Next the bold Amazon’s whole force defied;  
 And conquered still, for Heaven was on his side.

Nor ended here his toils: His Lycian foes,  
 At his return, a treacherous ambush rose,  
 With leveled spears, along the winding shore;  
 There fell they breathless, and returned no more.  
 At length the monarch, with repentant grief,  
 Confessed the gods, and god-descended chief;  
 His daughter gave, the stranger to detain,  
 With half the honors of his ample reign."

King Proetus was succeeded by his son, Megapenthes, who exchanged Tiryns for the kingdom of Argos with Perseus, son of Danaë and Jove, the mythic founder of Mycenæ (Pausanias, II., 16). Perseus was succeeded by his son, Electryo (Apollodorus, II., 4; Pausanias, II., 22, 8; 25, 9), father of Alemene, the mother of Hercules, who, like his father Perseus, resided at Mycenæ. Electryo, so the legend goes, ceded Tiryns and Mycenæ to Amphitryo, son of Alcæus, and grandson of Perseus and Andromeda (Apollodorus, II., 4; Hesiod, Scut. Her. 86). Amphitryo married Alemene, the mother of Hercules, but was expelled by his uncle Sthenelus, father of Eurystheus, who became king of Argos, Tiryns, Mycenæ, Mideia, and Heræum (Apollodorus, II., 4; Ovid, IX., 273). Hercules conquered Tiryns, and is said to have inhabited it for a long time, in consequence of which he is frequently called the Tirynthian (Pindar, Ol. XI., 40; Ovid, Met. VII., 410; Virgil, Æn. VII., 662).

In the Dorian invasion, which tradition puts eighty years after the Trojan war, Tiryns, as well as Mycenæ, Hesyæ, Mideia, and other cities, was forced to aggrandize the power of Argos and lost its autonomy. Nevertheless, Tiryns remained in the hands of her Achaic population, which, together with that of Mycenæ, sent a contingent of four hundred men to the battle of Plataea. In consequence of this patriotic action, the name of Tiryns, together with the names of the other Greek cities that had taken part in that glorious battle, was engraved on the bronze column with the golden tripod, which, as tenth part of the booty, the Spartans consecrated to the Pythian Apollo at Delphi, and which now decorates the old Hippodrome, called Maïdan, at Constantinople. The glory that Tiryns acquired hereby excited the jealousy of the Argives, who had remained neutral throughout the Persian war, and who began to consider the city a dangerous neighbor, especially so since it had fallen into the hands of their seditious slaves (Γοργυνοί), who main-

tained themselves for a time behind the Cyclopean walls of the citadel and dominated the land. The insurgents were defeated; but soon afterward (468 B. C.) the Argives laid the town in ruins, destroyed part of its Cyclopean wall, and forced the Tirynthians to settle at Argos. According to some, they fled to Epidaurus. But my friend, Professor J. P. Mahaffy (see the periodical "*Hermathena*," V.), has proved beyond doubt that the destruction of Tiryns by the Argives belongs to a remoter antiquity.

The statement by Diodorus, that Mycenæ was the last of the conquered cities that were subdued by Argos, is apparently confirmed in the Homeric catalogue of the ships (called the *Bœotia*), where Tiryns is mentioned as a vassal to Argos, and Mycenæ as the capital and residence of Agamemnon. But when that catalogue was composed, Argos had already conquered the whole sea-shore of the Argolic peninsula, and Mycenæ lies in the extreme south of the domain attributed to Agamemnon. The traditions were perhaps still too powerful for the poet to have dared to represent Mycenæ as a vassal to Argos; but he positively denies that Mycenæ had any hegemony whatever over the Argive plain. There is also a passage in Homer (*Iliad*, IV., 50-56) that seems to corroborate the hypothesis of the early destruction of Mycenæ, and to contradict categorically the stories borrowed by Diodorus and Pausanias from Ephorus. The latter seems to have been mistaken regarding King Pheidon of Argos; for, according to Theopompus and Diodorus (*apud* Syncel., *Chr.*, p. 262), he belongs to the ninth century B. C., which date is confirmed by the Parian chronicle. The Homeric passage, in Pope's translation, is as follows:

"At this the goddess rolled her radiant eyes,  
Then on the Thunderer fixed them, and replies:  
Three towns are Juno's on the Grecian plains,  
More dear than all the extended earth contains—  
Mycenæ, Argos, and the Spartan wall;  
These thou may'st raze, nor I forbid their fall:  
'Tis not in me the vengeance to remove;  
The crime's sufficient that they share my love.  
Of power superior why should I complain?  
Resent I may, but must resent in vain."

It is obvious that Homer intended to point here to the destruction of at least one of the three cities that he names, and Argos and Sparta not being destroyed, the destroyed city could

be no other than Mycenæ. The word διαπέρδαι may also point to the complete destruction of the city. If so, this Homeric passage gives us the surest proof that Mycenæ, as well as Tiryns, was destroyed in a remote antiquity; for, as mentioned before, Tiryns, at the time of Homer, had long since lost its autonomy and was vassal to Argos. Now this hypothesis, that the great destruction of Tiryns and Mycenæ took place in a remote antiquity, finds in the monuments of both cities a remarkable confirmation. On the west side the Cyclopean wall of the acropolis of Mycenæ is almost totally destroyed for a distance of forty-five feet, and on its inner side has been substituted a miserable retaining-wall of small stones with earth, which was deeply buried in the prehistoric *débris*. I further call attention to the inscription published in my work entitled "Mycenæ" (p. 129). This certainly belongs to the sixth century B. C., but it is scratched on a fragment of that varnished, lustrous-black Hellenic pottery, which is later by at least three centuries than the archaic terra cottas that we find at Tiryns and at Mycenæ by thousands on the surface of the ground.

A further proof that Tiryns and Mycenæ were destroyed in a remote prehistoric age is found in the enormous masses of knives and arrow-heads, of a very primitive form, of obsidian, and of painted Hera-idols in the form of a cow or a horned female, as well as in the innumerable terra cotta vases of primitive forms with most ancient paintings in colors. We found all these objects in vast abundance in the grand palace, which occupies the whole upper part of the Citadel of Tiryns, and consequently there can be no doubt that they were still universally used by the inmates of the palace at the time of its destruction. As a final proof, I may mention the total absence of varnished black, red, or yellow Hellenic terra cottas, of which, in spite of my most zealous researches, I have not been able to discover a single potsherd at Tiryns, either in the excavations on the upper acropolis or in those on the middle terrace.

To secure for science any light that might be obtained from ancient architectural remains, I engaged again the services of the eminent architect of the Imperial German Archæological Institute at Athens, Dr. Wm. Dörpfeld, of Berlin, who for four years had managed the technical part of the German excavations at Olympia, and who had been for five months, in 1882, my collaborator at Troy. We most carefully excavated

the whole upper and the whole middle acropolis, but dug on its lowest terrace only a large trench from south to north, and another from east to west. The walls are on an average twenty-four feet thick, but in some places in the upper acropolis forty-eight feet. They consist of large, almost unwrought blocks, which are piled on one another without any binding material. Remains of towers may be seen in several places. One tower, close to the principal entrance in the middle of the east side, is still well preserved. Its height above the wall is twenty-three feet. The wall of the upper acropolis is built in two off-sets — a lower wall that rests on the rock, and an upper wall that recedes by about twenty-six feet. The latter is provided in several places with longitudinal galleries five feet three inches broad, and twice as high, which are covered, ogive-like, with horizontally overlapping stones. Several doors, which have likewise an ogive-like form, lead from these galleries to the terrace of the projecting lower wall. The galleries were, consequently, intended to afford to the defenders of the lower wall a refuge, from which they could rapidly reach the parapet.

In one part of the acropolis there are on the top of the wall four bases of columns *in situ*, which seems to prove that there was on the wall, all around the citadel, a roofed passage, such as a well known Athenian inscription proves to have existed on the city wall of Athens. This Tirynthian passage on the outside probably consisted of a wall of raw bricks, pierced by numerous hatchways, and on the inside — that is to say, toward the citadel — of wooden columns. In the Athenian wall these hatchways were shut with wooden lids. That the exterior wall of this hall consisted of raw bricks of clay, is proved by the masses of *débris* of half-baked bricks with which the plateau of the lower wall is covered.

The principal entrance to the acropolis was on the eastern side, close to the above-mentioned great tower. An enormous rampart, fourteen feet eight inches broad, along the great fortification-wall, led up to the citadel. To the right, in ascending, stood the great tower, so that the assailants had to expose to the defenders their right side, which was unprotected by the shield. There must have been a special portal at the spot where the rampart reaches the level of the middle wall; but no gate-posts, properly speaking, remain there *in situ*. At this point the road branches on the right side to the middle and the lower citadel



while to the left another road, which is still encompassed by high walls, leads to the upper citadel. Having removed the tremendous masses of *débris* and huge stones that obstructed this latter road, we struck, at a distance of fifteen yards from the great tower, the principal gate of the upper citadel. It is formed by two huge uprights, ten and a half feet high, three feet broad, and four and a half feet deep, and has a breadth of nine feet three inches. It was shut by two wooden wings. The holes in which the door-hinges turned are still preserved in the threshold; and in the two uprights are holes, six inches in diameter, for the large wooden bolt or cross-bar, by which the gate was fastened. The upper lintel, which spanned the two uprights, is not preserved. The structure of this gate resembles very much that of the Lions' Gate at Mycenæ. A steep road leads from the gate, along the inside of the eastern exterior wall, to the upper acropolis. Here it enlarges and forms a sort of court-yard, having on its western side a vast propylæum, which again shuts up the acropolis. It consists, on the east side, of a vestibulum formed by two columns between two parastades or antæ. On the west side is a similar back hall. The partition-wall between the two halls contains the great door, which was also closed by two wings. The holes of the door-hinges are still preserved in the huge threshold. On the western side of the propylæum was a court-yard, on the northern side of which open two chambers.

Unfortunately we are unable to determine with certainty what buildings there were on the southern side of this court, for a small church was erected here in the Byzantine time, and for this purpose the remains of the ancient palace were destroyed. Around the church, as well as inside of it, we found numerous tombs, all of which faced to the east. The foundations of the church were covered up by a modern thrashing-floor, which measured thirty-three feet in diameter. A corridor, four feet six inches broad, ascended from the propylæum to the inner apartments of the palace; but the chief entrance was by a second propylæum, by which one came to the principal court. This propylæum is on the same plan as the first, but smaller. The court is surrounded by large covered porticoes, and there is an altar in the midst of the south side, near the small propylæum. In the "Odyssey" (XXII., 335, 336) we read of a similar altar in the court of the palace of Ulysses, which was

sacred to Zeus. The whole floor of the court, forty-two feet broad by fifty-five feet long, consists of a sort of mosaic of lime and small pebbles about an inch thick, which explains the *τυκτὸν δάπεδον* ("beaten floor") in the palace of Ulysses. A similar floor may be seen in all the apartments and courts of the Tirynthian palace.

In front of the altar, on the northern side of the court, is the principal hall of the palace. It consists of a vestibulum, which opens on the court with two columns between two parastades; of a second fore-room, which is joined to the vestibulum by three doors, each of which had two wings; and of the saloon proper. This latter is thirty-one feet broad by thirty-nine feet long, and contains in the midst four columns, which supported the ceiling. Between the columns, in the floor, is a large circle, about ten feet in diameter, whose use is unknown to us. The mosaic floor of the principal hall is divided by incised lines into squares, and still shows in many places traces of the red painting with which it was adorned. Traces of a similar painting may be seen also on the floor of the great court and on that of several smaller rooms.

A side door leads from the fore-room, in a westerly direction, into several corridors and small rooms, among which the bath-room is the most remarkable. The floor of this chamber, which is ten feet square, consists of one single block of blue limestone about two feet two inches thick. Along the walls, on all four sides of this bath-room, may be seen, in the border of the large stone, bored holes, which probably served for fastening a wooden lining to the walls. On the eastern side a gutter is cut out in the stone, which carried off the water; its continuation, as an underground channel, may be seen below several rooms. To this bath-room no doubt belonged the bathing-tub of terra cotta ornamented with spirals, of which a large fragment has been found. On the eastern side of the principal hall, around a second, smaller court, are grouped several rooms, probably the apartments of the women, while the large hall, with the large court and the adjoining chambers, may have been the habitation of the men. The smaller court has porticoes on two sides. The rooms communicate with one another, either directly by doors, or by corridors. The above-mentioned corridor also leads from the propylæum to the smaller court. Owing to repeated restorations, the original plan of the rooms on the eastern side of this corridor cannot be distinctly recognized. We recognize some restorations

in other parts of the palace; but there cannot be the slightest doubt that the whole palace, with all its principal halls and rooms, was built contemporaneously with the great citadel-walls, for the pottery found in the palace shows a striking similarity to the most ancient vases found by me in the royal sepulchres at Mycenæ. Precisely the same Mycenaean ornamentation we find in the wall-paintings of the palace, which must therefore belong to the same heroic age.

The foundations of the palace-walls rest on the rock about ten feet below the floor, and consist of larger and smaller unwrought quarry-stones, which are joined without any binding material. The lower parts of the palace-walls, which are preserved to a height of eighteen inches to three feet, consist of quarry-stones bonded with clay. The missing upper parts of the palace-walls consisted partly of the same material, and partly of sun-dried bricks, precisely like all the large buildings of the Pergamos of Troy. The masses of quarry-stones and of half-baked or thoroughly baked bricks, with which all the rooms of the palace were filled, leave no doubt in this respect. The external sides of the walls were first covered with a coating of clay, which was covered with a coating of chalk. This latter shows in a great many places, still *in situ*, traces of the paintings with which it was covered. But well preserved colors may be seen on a vast number of pieces of the coating, which had fallen from the walls, and which we found within the palace. The wall-paintings are in five colors—red, yellow, black, white, and blue—and exhibit for the most part an ornamentation that is already known to us from the Mycenaean period. So, for instance, the ornamentation of the marvelous sculptured ceiling of the thalamos in the treasury at Orchomenus, as well as ornaments of Mycenaean vases, and of objects found in the dome-like sepulchre of Menidi, occur almost without alteration in the wall-paintings of the palace at Tiryns. On the other hand, we find among them no Greek ornaments whatever of the classical time. We also see in the wall-paintings figural representations—a bull, on which a man dances like an equestrian performer, and large fragments representing wings or sea-animals.

The magnificence of the palace is also shown by the vast number of sculptured ornaments found by us in its ruins. Besides plain spiral ornaments of a green stone, a frieze of alabaster, which resembles a Doric triglyph-frieze, deserves

particular attention. The triglyphs are decorated with small rosettes, the metopes with palmettes and spirals. The most remarkable thing is, that this frieze is ornamented all over with many hundred pieces of blue glass. These are half an inch to an inch long, partly quadrangular and partly round. We also found in the large court a Doric capital of porous stone, which shows a very ancient style, and has sixteen flutings.

The masses of charcoal, burned bricks, and calcined stones prove that the palace was destroyed by fire. The walls have suffered most near the doors, for the thick wooden posts of the door-frames, and the wooden door-wings, gave abundant food to the flames. The quarry-stones of the walls are burnt to lime. The clay with which they were cemented has become a solid terra cotta, in consequence of which we experienced the very greatest difficulty in cutting away these wall-fragments with pickaxes. The fire was the more violent as nearly all the columns of the palace consisted of wood; only the bases were of stone, and they also show the traces of the great fire. The upper parts of the building fell in the catastrophe, and the whole palace thus became a great heap of ruins.

The hill remained in this condition for nearly three thousand years; only at the southern extremity of the citadel, as before mentioned, was built in the Byzantine time a chapel, and the whole southern part of the acropolis was converted into a cemetery. There was already a settlement on the rock of Tiryns before the palace and the great walls were built. In one of the excavations, in the middle acropolis, we struck, about sixteen feet below the floor of the upper citadel, a chamber whose walls consisted of quarry-stones and clay, and whose floor was of beaten clay. The chamber was filled with red brick *débris* and charcoal, among which we found a great deal of hand-made monochromatic pottery, very similar in fabric, form, and general appearance to the terra cottas found by me in the two most ancient cities of Troy. Here are the very same lustrous black, yellow, red, and brown vases, with vertically perforated excrescences on the sides. But now and then we also find, in these remains of the first Tirynthian settlement, hand-made vases with rudely painted stripes, the borders of which are generally diffused and rarely well defined. The vases of a dead black color with white bands, and the green ones with black stripes, deserve particular attention.

In the excavations on the middle terrace came to light, at various heights, narrow walls of quarry-stones and clay, the plan of which we have not been able to make out. They must belong to offices and outhouses, which were badly built and therefore had to be often renewed or restored. This would partly explain the greater accumulation of *débris*, which has here in some places a depth of twenty feet. This middle terrace is separated by a powerful retaining-wall from the lower acropolis, which extends to the north. In the lower acropolis we excavated, diagonally and longitudinally, two large trenches down to the rock, and struck there also the foundations of several buildings. The accumulation of *débris* is there ten feet deep, but in some places the rock is visible above ground.

In examining the plan of the acropolis of Tiryns, two questions will suggest themselves to the reader: first, where the people lived whose kings had their sumptuous palace on the upper citadel, and probably their outhouses and offices on the middle and lower terraces of the fortress; and, secondly, where the sepulchres of the kings may be looked for? In the numerous shafts that I sank in all directions in the low table-land around the acropolis, I found in the upper layers nothing but varnished Hellenic pottery, and in the lower strata the very same archaic terra cottas as in the citadel, together with large masses of burned brick *débris*. Consequently there can be no doubt that the lower city extended around the acropolis, or that it existed for a long number of centuries after the destruction of the royal palace, which was never rebuilt, and whose site remained for ever a desert. The Tirynthian bronze coins, which have on one side an Apollo head with a diadem, on the other side a palm-tree with the legend ΤΙΡΥΝΣ, which are for the most part of the fifth century B. C., but seem to belong to the Macedonian time, make it highly probable that the lower city existed until the end of the fourth century B. C.

Regarding the tombs of the ancient kings of Tiryns, there is not a stone above ground that suggests their existence in the immediate neighborhood of Tiryns. I think, therefore, they may be looked for in the caverns that Strabo (VIII., 368) mentions at Nauplia. He says: "Close to Nauplia are caverns, and labyrinths are built in them, which are called the Cyclopean [buildings]." But as no trace of such caverns, with or without labyrinths, can be seen in or near Nauplia, I suppose they exist

in the western slope of the acropolis-rock of Nauplia, and are covered up by the houses of the modern town. I put my opinion here on record, leaving it to a future generation to profit by my suggestion; for the present, there is nothing to be done.

My excavations at Troy have proved that not only the great walls, but also the two temples and all the other large buildings of the Pergamos, consisted of sun-dried bricks; that a similar material was used for the palace of the kings of Mycenæ is proved by the masses of *débris* of bricks within and near the large foundations on the top of the acropolis-rock. The immense masses of *débris* of bricks that I found in my excavations at the Bœotian Orchomenus point to a similar building material for that royal city. Again, my present excavations at Tiryns have furnished evidence that the palace of the ancient kings of that city consisted chiefly of sun-dried bricks. It appears, therefore, that in a remote antiquity all the principal buildings were of this material. But Vitruvius proves that this mode of construction was still in use in classic times, for he cites (II., 8, par. 9, 10) a whole series of grand buildings that had been made of raw bricks; as, for instance, part of the city wall of Athens, the temple of Jupiter and Hercules at Patræ, the palace of the Attalian kings at Tralles, and the palace of Crœsus at Sardis, which was still intact in the time of Vitruvius, and which, as he says, the Sardians had dedicated to their fellow-citizens as a place of repose in the leisure hours of old age, and as a gerusia for the council of the elders. Vitruvius says:

“Farther on, at Halicarnassus, the palace of the most powerful king Mausolus—though everything in it is ornamented with Proconnesian marble—has walls made of raw bricks, which show unto the present time a wonderful solidity, and which are smoothed and polished in such a manner that they seem to have the perviousness of glass to light. And that king did not do it for want of means, for he reigned over all Caria, and had immense revenues.”

I hope that my excavations at Tiryns may be of some profit to science, for once we could not boast of knowing the plan of the smallest Greek house, whilst we possess now an excellent plan of the palace of the mighty legendary kings of Tiryns, a palace contemporaneous with its gigantic Cyclopean walls, which have always been considered the most ancient structures

preserved to us from the heroic age of Greece. Besides the wall-paintings in the Etruscan tombs and small remains in and near Rome, the wall-paintings of Herculaneum and Pompeii were hitherto the oldest we had, while now we possess a vast number of beautiful, highly interesting wall-paintings of the second millennium B. C., nay, of the legendary heroic age. I also dare to hope that the masses of wonderful pottery found in the palace, which more than the architecture shows us the degree of civilization of its inmates, will be of some interest to science.

HENRY SCHLIEHMANN.